

therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;

wherein the channel region, the source and drain region of said one thin film transistor is formed in a semiconductor island;

an organic resin film formed over said first substrate to provide a leveled upper surface over said first substrate, said organic resin film covering said thin film transistor;

a pixel electrode formed on said leveled upper surface, said pixel electrode being electrically connected to said thin film transistor through an opening formed in said organic resin film;

a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between the first substrate and the second substrate;

an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

RECEIVED
OCT 10 2001
TECHNOLOGY CENTER 2806

13. (Thrice amended) A device having at least one liquid crystal panel, said liquid crystal panel comprising:

a first substrate having an insulating surface;

a second substrate being opposed to the first substrate;

at least one semiconductor element being formed over the first substrate, said semiconductor element including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;

wherein the channel region, the source and drain region of said one semiconductor element is formed in a semiconductor island;

an organic resin film formed over said first substrate to provide a leveled upper surface over said first substrate, said organic resin film covering said semiconductor element;

E2
E2
cont

a pixel electrode formed on said leveled upper surface, said pixel electrode being electrically connected to said semiconductor element through an opening formed in said organic resin film;

a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between the first substrate and the second substrate, and

an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

14. (Amended) A device according to claim 13, wherein said organic resin film comprises polyimide.

E3

15. (Amended) A device according to claim 13, wherein said pixel electrode is transparent.

16. (Amended) A device according to claim 13, wherein said thin film transistor is a top-gate type in which said gate electrode is located above said channel region.

21. (Twice amended) A television comprising:

a tuner for receiving television radio wave;

sub 3
F3

a liquid crystal panel operationally connected to said tuner, said liquid crystal panel comprising:

E4

a first substrate having an insulating surface;

a second substrate being opposed to the first substrate;

at least one thin film transistor being formed over the first substrate, said thin film transistor including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;

wherein the channel region, the source and drain region of said one thin film transistor is formed in a semiconductor island;

F3
E4
cont.

an organic resin film formed over said first substrate to provide a leveled upper surface over said first substrate, said organic resin film covering said thin film transistor;
a pixel electrode formed on said leveled upper surface, said pixel electrode being electrically connected to said thin film transistor through an opening formed in said organic resin film;
a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between the first substrate and the second substrate;
an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

33. (Twice amended) A portable computer having a liquid crystal panel, said liquid crystal panel comprising:

Sub
E4

E5

a first substrate having an insulating surface;
a second substrate being opposed to the first substrate;
at least one thin film transistor being formed over the first substrate, said thin film transistor including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;
wherein the channel region, the source and drain region of said one thin film transistor is formed in a semiconductor island;
an organic resin film formed over said first substrate to provide a leveled upper surface over said first substrate, said organic resin film covering said thin film transistor;
a pixel electrode formed on said leveled upper surface, said pixel electrode being electrically connected to said thin film transistor through an opening formed in said organic resin film;
a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between the first substrate and the second substrate;
an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

✓ ✓
Please add the following new claims 57-65 as follows:

Sub
FS
E4

-- 57. A device having at least one liquid crystal panel, said liquid crystal panel comprising:

- a first substrate having an insulating surface;
- a second substrate opposed to said first substrate;
- at least one thin film transistor formed over said first substrate, said thin film transistor including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;
- wherein said channel region, said source and drain region of said one thin film transistor is formed in a semiconductor island;
- a leveling film formed over said first substrate to provide a leveled upper surface over said first substrate, said leveling film covering said thin film transistor;
- a pixel electrode formed on said leveled upper surface, said pixel electrode electrically connected to said thin film transistor through an opening formed in said leveling film;
- a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between said first substrate and said second substrate;
- an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

58. A television comprising:

- a tuner for receiving television radio waves;
- a liquid crystal panel operationally connected to said tuner, said liquid crystal panel comprising:
 - a first substrate having an insulating surface;
 - a second substrate opposed to said first substrate;

at least one thin film transistor being formed over said first substrate, said thin film transistor including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;

wherein said channel region, said source and drain regions of said one thin film transistor is formed in a semiconductor island;

a leveling film formed over said first substrate to provide a leveled upper surface over said first substrate, said leveling film covering said thin film transistor;

5
a pixel electrode formed on said leveled upper surface, said pixel electrode electrically connected to said thin film transistor through an opening formed in said leveling film;

6
a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between said first substrate and said second substrate;

an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

59. A portable computer having a liquid crystal panel, said liquid crystal panel comprising:

a first substrate having an insulating surface;

a second substrate opposed to said first substrate;

at least one thin film transistor being formed over said first substrate, said thin film transistor including at least a channel region, source and drain regions with said channel region therebetween, a gate insulating film adjacent to said channel region and a gate electrode adjacent to said channel region with said gate insulating film interposed therebetween;

wherein said channel region, said source and drain regions of said one thin film transistor is formed in a semiconductor island;

a leveling film formed over said first substrate to provide a leveled upper surface over said first substrate, said leveling film covering said thin film transistor;

FS
End
a pixel electrode formed on said leveled upper surface, said pixel electrode being electrically connected to said thin film transistor through an opening formed in said leveling film;

a liquid crystal material having ferroelectricity or anti-ferroelectricity and being formed between said first substrate and said second substrate;

an opposed electrode formed over said second substrate and opposed to said pixel electrode with said liquid crystal material interposed therebetween.

60. A device according to claim 57, wherein said semiconductor island is a crystalline semiconductor island.

61. A device according to claim 57, wherein said pixel electrode is transparent.

62. A television according to claim 58, wherein said semiconductor island is a crystalline semiconductor island.

63. A television according to claim 58, wherein said pixel electrode is transparent.

64. A portable computer according to claim 59, wherein said semiconductor island is a crystalline semiconductor island.

65. A portable computer according to claim 59, wherein said pixel electrode is transparent. --

REMARKS

At the outset, the Examiner is thanked for the review and consideration of the present application.

The Examiner's final Office Action dated June 5, 2001 has been received and its contents reviewed. By this Amendment, claims 37-40, 45-48, 55, and 56 have been canceled, claims 9,